REMARKS

An Office Action was mailed on June 14, 2005. Claims 1 - 16 are pending, of which claims 1 and 16 are the sole independent claims.

By the foregoing, the subject matter of claim 3 and intervening claim 2 are incorporated in claim 1; and claims 2 and 3 are cancelled, claims 13 and 16 are amended; and new claims 17-31 are presented.

The Examiner has indicated that claim 3 is allowable if rewritten to independent form and including the subject matter of any intervening claim. Applicant expresses his gratitude to the Examiner for the indication of allowability of claim 3 and requests the same consideration for claim 1. Thus, the subject matter of claims 2 and 3 are now incorporated in claim 1 rendering claim 1 allowable. Claims 2 and 3 are cancelled. Thus, claim 1 and now dependent claims 4-15 appear allowable. The rejections to claims 1-15 are, thus, rendered moot.

Claim 16 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,761,269 to Conger (Conger) in view of U.S. Patent No. 5,888,907 to Tomoyasu et al. (Tomoyasu). As now claimed, the reaction chamber for an epitaxial reactor comprises a susceptor that supports an insulating and chemically resistant flat plate. Further as claimed, the flat plate faces the flat zone of a claimed belljar and is arranged to deflect gases coming out of a plurality of pipes of a symmetrical annular distribution chamber. Advantageously, the claimed plate permits a uniform horizontal gas flow in the upper part of the belljar over the susceptor. None of the cited reference including Conger and Tomoyasu alone or in any combination thereof

are able to achieve such uniform horizontal gas flow nor do these reference alone or in any combination thereof teach, disclose, or suggest the presently claimed structure of the flat plate.

Conger, with reference to Fig. 5 teaches a pyramid susceptor reactor having a rotating carousel 114. Gas is fed from a manifold 16 and enters a flow channel 112. The channel emits the gases directly onto substrates 14 disposed on carousel 114. Conger fails to appreciate the significant advantages of deflecting gases and avoiding direct impact contact between gases flowing from a channel to a substrate.

Tomoyasu teaches a disc susceptor reactor. The reactor comprises an electrode plate 40 disposed on a cylinder that does not face the belljar but rather is located within the belljar. A circular showerhead 30 having gas spouts 36 is disposed above the plate 40. In fact, plate 40 is not supported by the susceptor as claimed since the susceptor is in fact mounted on the gas diffuser. Furthermore, it does not deflect gases as it is adjacent to the outlet of the diffuser pipes feeding gases.

It is unclear how a combination of Tomaysu and Conger would be obvious to one skilled in the art. Conger is a pyramid susceptor reactor while Tomaysu is a disc susceptor reactor. As is well understood in the art, these two are completely different types of reactors. Thus, one skilled in the art would not look to use one type with another as suggested. For all the reasons, given the Examiner is requested to withdraw the rejection.

Applicant has furthermore provided a new claim 17. Therein, applicant claims projecting baffles that are inserted in a susceptor body. While applicant's own prior art, namely European Patent Application No. 415191, shows baffles extending from the top of the susceptor to the bottom of

the susceptor these do not disclose the same subject matter now being claimed. The baffles of the prior art have a length corresponding to exactly the height of the susceptor. The presently claimed baffles have a length approximately half the height of the susceptor body. Unlike the prior art, the presently claimed baffles are advantageous in that they improve the uniformity of thickness deposited in the vertical direction, i.e., between one ring and a next one. Please see page 11 of the specification.

All dependent claims are allowable at least for the same reason as the independent claim from which they depend.

An effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that all claims are in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper, including any extension fees, may be charged on Deposit Account 50-1290.

Respectfully submitted,

Hassan A. Shakir
Reg. No. 53,922
(212) 940.6489

CUSTOMER NUMBER 026304
DOCKET NO.: SAIC 18 550 (100788-09749)
Fax: (212) 894-6489 (direct fax)